

Patent Claims

1. Moulding composition containing

5 A) at least one elastic/thermoplastic graft polymer obtained by free-radical emulsion polymerisation of resin-forming vinyl monomers in the presence of rubber present in latex form having a glass transition temperature of $\leq 0^{\circ}\text{C}$ using an initiator combination comprising a persulfate compound and a redox initiator system and

10 B) at least one copolymer synthesised from styrene and acrylonitrile and optionally further comonomers and optionally

15 C) at least one resin selected from the group of polycarbonates, polyesterarbonates, polyesters and polyamides,

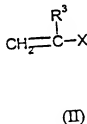
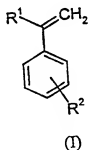
characterised in that the graft polymer A) is produced in such a manner that, at the beginning of the graft polymerisation reaction the persulfate compound is added in quantities of 0.05 to 1.5 wt.% (relative to the monomers apportioned up to the time of addition of the redox initiator), after addition of 1 to 50 wt.% of the monomers (relative to the total quantity of monomers), the redox initiator components are added in quantities of 0.1 to 2.5 wt.% (relative to the monomers apportioned since the time of addition of the redox initiator).

2. Moulding composition according to claim 1, characterised in that component A) is present in quantities of 1 to 80 wt.%.

30 3. Moulding composition according to claim 1, characterised in that the rubber used is a mixture of at least two rubber latices having

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- a) an average particle diameter d_{50} of ≤ 320 nm and a gel content of ≥ 70 wt.% and
- 5 b) an average particle diameter d_{50} of ≥ 370 nm and a gel content of ≥ 70 wt.%.
4. Moulding composition according to claim 1, characterised in that the elastic/thermoplastic graft polymer A) has a rubber content of 20 to 80 wt.%.
- 10 5. Moulding composition according to claim 1, characterised in that the resin-forming monomers in component A) are compounds of the formula (I) or (II) or mixtures thereof:



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in which

- R^1 represents hydrogen or methyl,
- 20 R^2 represents hydrogen, halogen or alkyl having 1 to 4 carbon atoms in ortho, meta or para position,
- R^3 represents hydrogen or methyl

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and

X represents CN , R^4OOC or $\text{R}^5\text{R}^6\text{NOC}$,

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in which

R^4 means hydrogen or alkyl having 1 to 4 carbon atoms;

and

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R^5 and R^6 mutually independently mean hydrogen, phenyl or alkyl having 1 to 4 carbon atoms.

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6. Moulding composition according to claim 1, characterised in that the redox initiator system for the production of the graft polymer A) is selected from di-tert.-butyl peroxide, cumene hydroperoxide, dicyclohexyl percarbonate, tert.-butyl hydroperoxide, p-menthane hydroperoxide and H_2O_2 or mixtures thereof as the oxidising component and at least one water-soluble compound having a reducing action as the reducing component.

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7. Moulding composition according to claim 6, wherein the oxidising agent is selected from cumene hydroperoxide, tert.-butyl hydroperoxide, p-menthane hydroperoxide or mixtures thereof.

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8. Moulding composition according to claim 6, wherein the reducing agent is selected from salts of sulfinic acid, salts of sulfurous acid, sodium dithionite, sodium sulfite, sodium hyposulfite, sodium hydrogen sulfite, ascorbic acid and the salts thereof, Rongalit C (sodium formaldehyde sulfoxylate), mono- and dihydroxyacetone, sugars, iron(II) salts, tin(II) salts, titanium(III) salts.

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9. Moulding composition according to claim 8, wherein the reducing agent is selected from dextrose, ascorbic acid or the salts thereof, sodium formaldehyde sulfoxylate or mixtures thereof.
- 5 10. Moulding composition according to claim 1, characterised in that potassium peroxydisulfate is used as the persulfate compound for the production of the graft polymer A).
- 10 11. Moulding composition according to claim 1, characterised in that the copolymer B) is synthesised from monomers selected from styrene, α -methylstyrene, acrylonitrile, methyl methacrylate, maleic anhydride, N-phenylmaleimide or mixtures thereof.
- 15 12. Moulding composition according to claim 1 additionally containing at least one resin selected from the group of polycarbonates, polyester carbonates, polyesters and polyamides.
- 20 13. Process for the production of graft polymers containing rubber by emulsion polymerisation using an initiator combination of a persulfate compound and a redox initiator system, characterised in that
- 25 i) the graft monomers are apportioned to the rubber latex,
- ii) at the beginning of the graft polymerisation reaction the persulfate compound is added in quantities of 0.05 to 1.5 wt.% (relative to the monomers apportioned up to the time of addition of the persulfate compound)
- 30 iii) after addition of 1 to 50 wt.% of the monomers (relative to the total quantity of monomers), the redox initiator components are added in

quantities of 0.1 to 2.5 wt.% (relative to the monomers apportioned since the time of addition of the persulfate compound).

14. Process according to claim 10 for the production of graft polymers
5 containing rubber according to claim 1.
15. Use of the moulding compositions according to any of claims 1 to 14 for the
production of mouldings.
- 10 16. Mouldings obtainable from moulding compositions according to any of
claims 1 to 14.

Add A2

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